

BACKGROUND

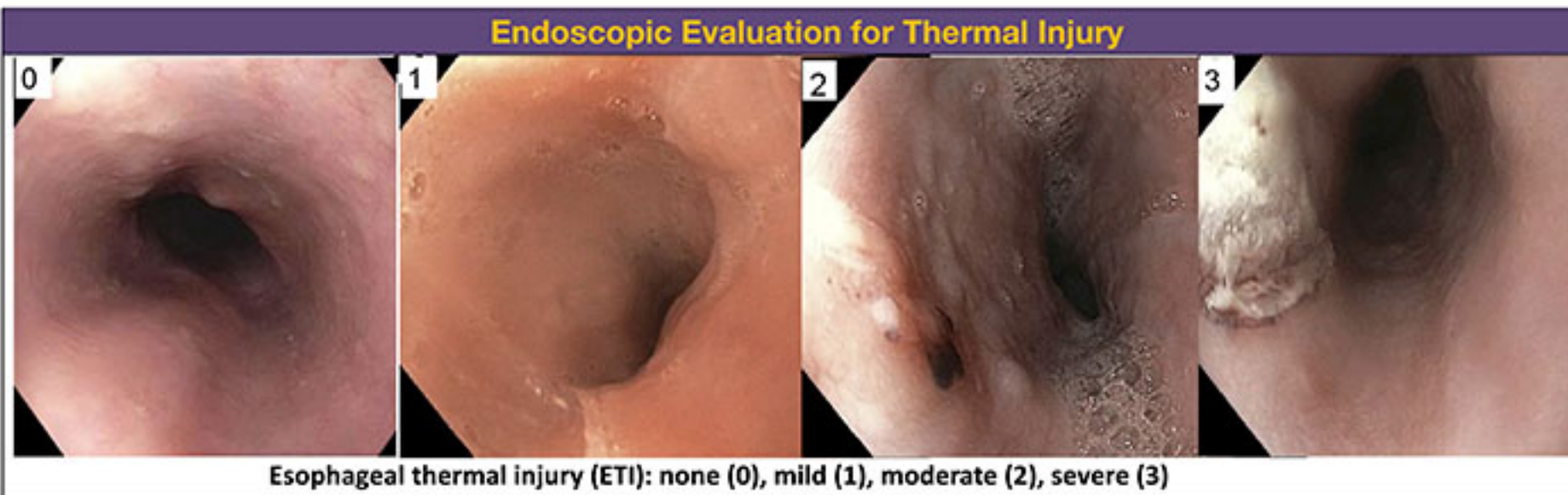
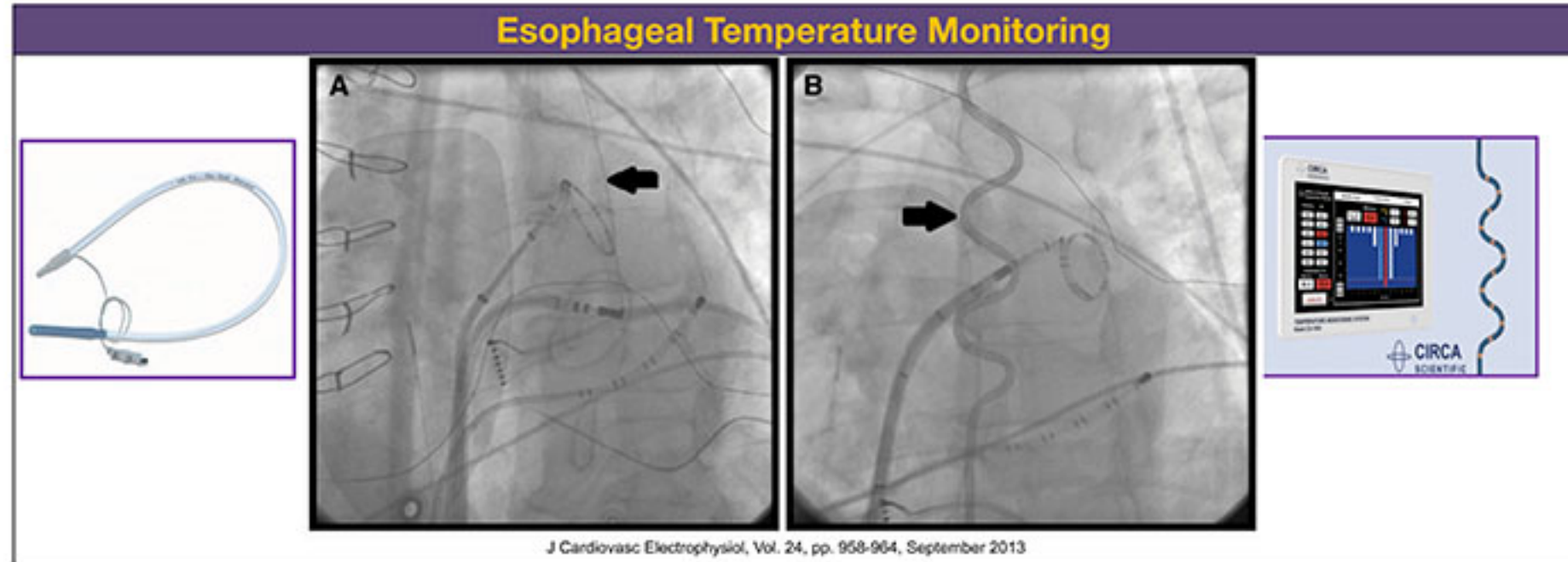
- Esophageal temperature monitoring during AF ablation is performed to prevent esophageal thermal injury (ETI).

OBJECTIVE

- To determine whether a multi-sensor temperature probe (MSTP) reduces endoscopy (EGD) detected ETI compared to single sensor temperature probes (SSTP).

METHOD

- Consecutive patients undergoing AF ablation at the University of Washington, using cryoballoon (CB) or radiofrequency ablation (RFA) with post-procedure EGD were included.
- SSTP was routinely used from April 2015 until May 2018, and MSTP was routinely used afterwards.
- For SSTP, ablation stop parameters were a rise of 0.2 C from baseline (RFA), or drop below 30 C (CBA).
- For MSTP, ablation stop parameters were 37.5 Celsius for RFA, or dropped below 25C for CBA.
- EGDs were performed in all patients 24 hours following their ablation
- ETI was classified as follows: normal (grade 0), mild erythema (grade 1), moderate shallow ulcer (grade 2) and severe or deep ulceration (grade 3).
- EGD findings were compared between SSTP and MSTP.

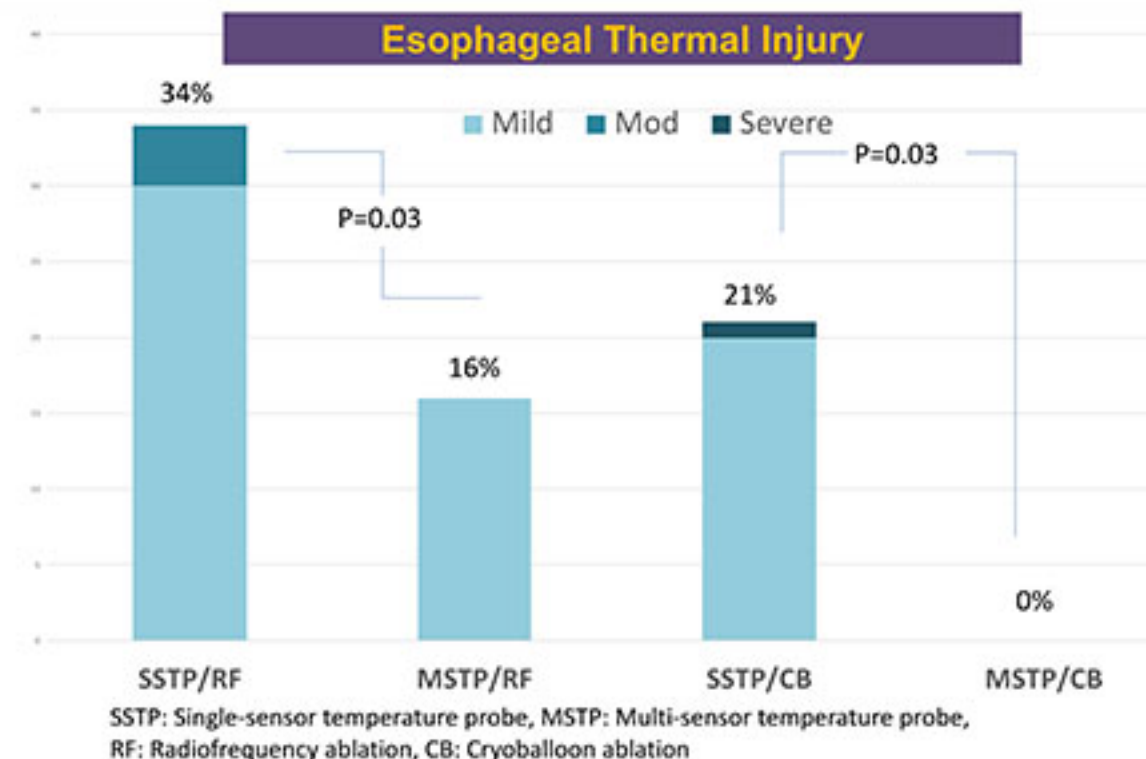


RESULT

- 239 patients met the inclusion criteria

	SSTP (n=203) ETI (%)	MSTP (n=36) ETI (%)
RFA	40/118 (34%)	4/25 (16%)
CBA	18/85 (21%)	0/11 (0%)

ETI on EGD	SSTP (n=203)	MSTP (n=36)
Total	58 (29%)	4 (11%)
Mild	52	4
Moderate	5	0
Severe	1	0



Patient Characteristics

	SSTP (n=203)	MSTP (n=36)	P
Age	63 ± 11	63 ± 10	0.99
Female	69 (34%)	14 (39%)	0.56
RFA	118 (58%)	25 (69%)	0.22
Cryo	85 (42%)	11 (31%)	0.22
HTN	54.7%	54.7%	1.00
DM	18.2%	15.6%	0.71
OSA	36.5%	33.5%	0.73
CAD	17.2	16%	0.86
CHF	22.2	20.7%	0.84
Stroke/TIA	5.9	3.9%	0.63
CHA2DS2VASc	2.5	2.6	0.90
GERD	25%	24%	0.89
BMI	31.5	32.2	0.93
LVEF	54 ± 12	55 ± 9	0.91

- ETI severity was mild in all patients monitored using the MSTP.
- For patients monitored using the SSTP, ETI severity was mild in 52 (25.6%), moderate in 5 (2.5%) and severe in 1 patient (0.5%).

CONCLUSIONS

- The use of multisensory temperature probe with conventional stop parameters significantly lowered the incidence of esophageal thermal injury compared to single sensor temperature probe.
- Prospective studies are needed to further define the safety limits of esophageal luminal temperature

Disclosure: None